



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/774,347	01/31/2001	Hideki Kuwajima	YAO-4337US	2586

7590 11/20/2003

Mr. Andrew L. Ney
Ratner & Prestia
One Westlakes, Berwyn, Suite 301
P.O. Box 980
Valley Forge, PA 19482-0980

EXAMINER

LETSCHER, GEORGE J

ART UNIT	PAPER NUMBER
2653	14

DATE MAILED: 11/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/774,347

Applicant(s)

KUWAJIMA ET AL.

Examiner

George J. Letscher

Art Unit

2653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 29-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 29-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3,6,9,11. 6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 8/28/03 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

Election/Restrictions

2. Applicant's election without traverse of Group I, claims 1-14 in Paper No. 12 is acknowledged. Applicant has now canceled claims 2-14 in favor of added new claims 29-43. Claims 1 and 29-43 remain pending in the application.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States

Art Unit: 2653

before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 29-34 and 37-41 are rejected under 35 U.S.C. 102(b) as being anticipated by PCT/US98/00464.

The aforementioned claims recite the following features, inter alia, disclosed in PCT/US98/00464: a head support mechanism including: a slider (24) having a magnetic head (not shown); a slider holding plate (70) for holding the slider; a pair of substrates (perpendicular portions 72A, 72B) each having an attached piezoelectric element (74A-D); elastic hinges (arms from 72A & 72B bending towards center of plate 70) for connecting the slider plate and substrates; a dimple (60) for supporting the slider plate such that the slider plate is rotatable in all directions; wherein the slider is rotated in a minutes scale (by virtue of slider movement being rotatable in any scale of measurement) around the dimple by contraction and expansion of at least one of the piezoelectric elements. The substrates are stacked on each respective piezoelectric element, with at least one substrate bent by a bimorph and expansion at one of the piezoelectric elements. The dimple is at an end of the of a load beam. The load beam has a pair of regulation portions (18) regulating rotation of the slider plate. The substrate roots are integral.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 35-36 and 42-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over PCT/US98/00464.

The description of PCT/US98/00464 is in paragraph 2, *supra*.

Regarding claims 35 and 42, PCT/US98/00464 does not expressly show the substrates and piezoelectric elements are coated with resin.

Official notice is taken of the fact that resin coatings on piezoelectric elements and their substrates was notoriously old and well known at the time the invention was made.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided the disk drive suspension of PCT/US98/00464 with the substrates and piezoelectric elements coated with resin. The rationale is as follows: one of ordinary skill in the art would have been motivated to have provided the disk drive suspension of PCT/US98/00464 with the substrates and piezoelectric elements coated with resin since one of ordinary skill in the art would have wanted to have protected the elements from stray electromagnetic signals that would have damaged the elements or the head signals.

7. Claims 36 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over PCT/US98/00464 in view of Crane et al (US 6,362,939).

The description of PCT/US98/00464 is in paragraph 2, supra.

Regarding claims 36 and 43, PCT/US98/00464 does not expressly show the substrate portions and elastic hinge portions having a conductor pattern transferring a signal to the head.

Crane et al disclose a microactuator suspension having a conductor pattern from the substrate portions and elastic hinge portions having a

Art Unit: 2653

conductor pattern transferring a signal to the head; see Figures 2-3 and 26-27 of Crane et al.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have furnished the disk drive suspension having substrate portions and elastic hinge portions of PCT/US98/00464 with the substrate portions and elastic hinge portions having a conductor pattern transferring a signal to the head as taught by Crane et al. The rationale is as follows: one of ordinary skill in the art would have been motivated to have furnished the disk drive suspension having substrate portions and elastic hinge portions of PCT/US98/00464 with the substrate portions and elastic hinge portions having a conductor pattern transferring a signal to the head as taught by Crane et al so that the signals between the head and the piezoelectric materials would have been coordinated for optimum performance of the suspension.


Art Unit: 2653

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Letscher whose telephone number is (703) 305-7912.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4750.

George Letscher
November 18, 2003



George Letscher
Primary Examiner
AU 2653